



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,133	10/29/2003	Cheng-Liang Chang	252011-1250	5523
47390	7590	12/28/2005	EXAMINER	
THOMAS, KAYDEN, HOSTEMEYER & RISLEY LLP 100 GALLERIA PARKWAY SUITE 1750 ATLANTA, GA 30339			THOMAS, LUCY M	
			ART UNIT	PAPER NUMBER
			2836	

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No.	Applicant(s)	
	10/696,133	CHANG ET AL.	
	Examiner	Art Unit	
	Lucy Thomas	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 5, 6, 8, 16-18 and 23-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 37 and 38 is/are rejected.
- 7) ☒ Claim(s) 1-4, 7, 9-15, 18 and 20-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1-4, 7, 9-15, 18 and 20-22 are objected to because of the recitation of the "second threaded portion" on line 8 of Claim 1 should not occur before the recitation of the "first threaded portion" in line 11-12 of Claim 1. Accordingly Claims 12, 37 and 38 are also objected to.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kogan (US 5,885,428) in view of Sinclair (US 6,116,990) and further in view of Gardner et al. (US 5,300,175). Regarding Claim 37, Kogan discloses an electrostatic chuck assembly 216 (Figure 2, Figure 3), comprising: base (unlabelled upper portion of 204 above 409) having a first and a second end surface; a ceramic element 404 disposed on the first end surface 205, 405; a pedestal 402 disposed on the ceramic element; a main body (lower portion of 204 below 409) disposed on the second end surface. Kogan teaches a through hole (see Figure 2) on the main body and a pushing element 210, but differs from that of Claim 1 since it is used for pushing the wafer. Kogan fails to disclose a first threaded portion on the pushing element and a second threaded portion

Art Unit: 2836

on the through hole of the main body. However, Sinclair discloses a chuck assembly, wherein screws or bolts 908 are threaded into the mating threaded holes 816 and are sequentially torqued so as to draw a gimbal shaft 810 into a press fit with a cavity 906 in the chuck (Figure 10, Column 15, lines 15-20). Sinclair further discloses a pattern of countersunk holes 818 provided on top of the gimbal shaft 810 to enable disassembly. Threaded jack holes 910 are aligned with the holes 818 to allow a threaded pushing element into each of the holes to provide a driving force to, after removal of bolts or screws 908, push the gimbal shaft 810 out of its press fit position within the cavity 906. Sinclair teaches that it was known in the art to use a threaded pushing element through a threaded hole to separate or disassembling two tightly fit structures without causing structural damage. Sinclair teaches that the pushing element disclosed in the invention is basically a screw with a screw head and threaded portion and retardant portions.

Neither Kogan or Sinclair teach providing a retardant layer on the pushing element, however, Gardner et al. teaches providing such a layer. Kogan, Sinclair and Gardner teach wafer handling equipment in the solid state device manufacturing art. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the chuck assembly of Kogan with a through hole and a pushing element with threaded portions as taught by Sinclair and retardant portions to reduce friction as taught by Gardner to push the ceramic element and pedestal from the base to disassemble the chuck assembly without causing structural damage to the chuck assembly, as taught by Sinclair.

Claim 38 basically recites the elements of chuck assembly as recited in Claim 37 except that the elements are identified only as objects or device, not with specifically an electrostatic chuck assembly, as in Claims 37. Therefore, please see the rejection above as the electrostatic chuck assembly also falls within the category of these objects and device.

Allowable Subject Matter

4. Claims 1-4, 7, 9-11, 12-15, 18, and 20-22 would be allowable if rewritten or amended to overcome the rejection(s), set forth in this Office action.

Response to Arguments

5. Applicant's arguments filed on December 09, 2005 have been fully considered. Arguments directed towards Claims 1-4, 9-11, 12-15, 18 and 20-22 are moot as the art rejection for these claims has been overcome due to Applicant's amendments.

The newly added Claims 37 and 38 are rejected. Claims 37-38 more broadly recite a chuck assembly or disassembling device, with less number of elements than the above-mentioned claims. Please see the rejection for Claims 37-38 above.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

Art Unit: 2836

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy Thomas whose telephone number is 571-272-6002. The examiner can normally be reached on Monday - Friday 8:00 AM - 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LT
December 15, 2005



PHUONG T. VU
PRIMARY EXAMINER